

Respiratory infections

ACTIVE CASE FINDING AMONG HOMELESS PEOPLE AS A MEANS OF REDUCING THE INCIDENCE OF PULMONARY TUBERCULOSIS IN GENERAL POPULATION

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Setting. In 2003-2012, in a northeastern region of Poland, over a two-fold higher decline in the incidence of tuberculosis (TB) occurred in comparison to the national average. During this time four programmes of active case finding (ACF) of TB were conducted, as part of which a total of 944 homeless individuals were examined and 21 cases of active TB were detected.

Objective. We conducted a study to find out whether the observed beneficial epidemiological trend is a result of these programmes.

Design. We modified and employed a crisscross SIS-type (Susceptible - Infected - Susceptible) model describing the dynamics of TB spread between the homeless and the non-homeless populations to evaluate how ACF programmes in the homeless community affected TB incidence in the general population.

Results and Conclusion. The values calculated from our model proved highly congruent with the actual epidemiological data. Our analysis showed a significant decline in TB incidence within one year of completion of each ACF programme. The model showed that each identified and cured case in the homeless community "reduced" the number of new cases in the general population by 3 to 4 within one year and by up to 20 within five years.